Patent claims

1. Dipeptide compound formed from an amino acid and a thiazolidine or pyrrolidine group, and salts thereof.

2. Dipeptide compound according to claim 1, characterised in that the amino acid is selected from a natural amino acid.

3. Dipeptide compound according to either one of the preceding claims, characterised in that at a concentration of 10 µM it brings about a reduction in the activity of dipeptidyl peptidase IV or DP IV-analogous enzyme activities of at least 10 %.

4. Dipeptide compound according to claim 3, characterised in that it brings about a reduction in activity of at least 40 %.

5. Dipeptide compound according to any one of the preceding claims, characterised in that the amino acid is selected from leucine, valine, glutamine, proline, isoleucine, asparagine and aspartic acid.

6. Dipeptide compound according to any one of the preceding claims, namely L-threo-isoleucyl pyrrolidide, L-allo-isoleucyl thiazolidide, 1-allo-isoleucyl pyrrolidide and salts thereof.

7. Dipeptide compound according to any one of the preceding claims, characterised in that the salts are organic salts such as acetates, succinates, tartrates or fumarates, or inorganic acid radicals such as phosphates or sulphates.

8. Salts of dipeptide compounds according to any one of the preceding claims, characterised in that they are

present in a molar ratio of dipeptide compound to salt of 1 : 1 or 2 : 1.

9. Salts of dipeptide compounds according to any one of the preceding claims, namely fumaric salts.

10. Salts of dipeptide compounds according to claim 9, namely fumaric salts of L-threo-isoleucyl thiazolidide or fumaric salts of L-allo-isoleucyl thiazolidide.

11. Pharmaceutical composition, characterised in that it comprises at least one compound or a salt thereof according to any one of the preceding claims optionally in combination with one or more pharmaceutically acceptable carriers and/or solvents.

12. Pharmaceutical composition according to claim 11, characterised in that the carrier is a carrier for parenteral or enteral formulations.

13. Pharmaceutical composition according to claim 11, characterised in that it is present in a formulation for oral administration.

14. Pharmaceutical composition according to any one of claims 11 to 13, characterised in that it additionally comprises an active ingredient having hypoglycaemic action.

15. Use of at least one compound or pharmaceutical composition according to any one of the preceding claims in the production of a medicament for reducing the activity of dipeptidyl peptidase IV or of dipeptidyl peptidase IV-analogous enzyme activities.

16. Use of at least one compound or composition according to any one of claims 1 to 14 in the production of a medicament for lowering the blood sugar level in the serum of a mammal below the glucose concentration that is characteristic of hyperglycaemia.

17. Use of at least one compound or composition according to any one of claims 1 to 14 in the production of a medicament for the oral treatment of metabolic disorders associated with diabetes mellitus.

18. Use of at least one compound or composition according to any one of claims 1 to 14 in the production of a medicament for the treatment of impaired glucose tolerance, glycosuria, hyperlipidaemia, metabolic acidoses, diabetes mellitus, diabetic neuropathy and nephropathy and also of sequelae of diabetes mellitus in mammals.